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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,432	05/09/2001	Jorg Dietrich	LINDE-566	2115
23599	7590	01/16/2004	EXAMINER	
MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			DUONG, THO V	
			ART UNIT	PAPER NUMBER
			3743	20

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,432

Applicant(s)

DIETRICH, JORG

Examiner

Tho v Duong

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,12,13,16,17 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) 19-24 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8,12,13 and 17 is/are allowed.
- 6) ☒ Claim(s) 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 18.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's response filed 10/23/2003 is acknowledged. Claims 8,12-13,16-17 and 19-24 are pending as filed in the Supplemental Reply filed 11/21/2002. Claims 19-24 have been withdrawn from further consideration.

Response to Arguments

Applicant's arguments filed 10/23/2003 have been fully considered but they are not persuasive. Applicant's argument that the reference to Dynamit Nobel article has a later publication date than the priority date of Applicant's German application DE. No. 10022595, has been very carefully considered but is not deemed to be persuasive. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15. As regarding claim 16, applicant further argues that reference to Eiji's 277 and Dynamit Nobel article does not disclose the welding of steel header to aluminum heat exchanger component. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). References to Eiji's 227 and Dynamit Nobel was not relied to show the teaching of forming a strong bond between a steel header and an aluminum heat exchanger component. The disclosure of bonding steel header and aluminum heat exchanger component has been shown in the reference of Showa Alum' 720A. References to Eiji's 227 and Dynamit Noble was relied only to show the teaching of using a transition layer comprises a steel layer and an aluminum layer being explosive welded together in order to form a strong

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transitional joint between aluminum and steel so that aluminum and steel components can be welded together on its respective same material by laser welding or any conventional welding which results in a stronger joint than brazing as disclosed in Showa Alum. Applicant is advised to see more about a transition joint between aluminum and steel by explosive bonding in reference to Hardwick (US 4,756,464).

Applicant's arguments, see the Response, filed 10/23/2003, with respect to claims 8,12,13 and 17 have been fully considered and are persuasive. The rejection of claims 8,12,13 and 17 as unpatentable over Davidian et al in view of Takashi Eiji and Dynamit Nobel has been withdrawn.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed subject matter of "a plurality of sheets of at least partially corrugated metal" must be shown or the feature(s) canceled from claim 8. No new matter should be entered. Figure 1 shows only the sheet element (2) but not corrugated metal.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the claimed subject matter in claim 17 is not described in the specification.

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Applicant has filed an Amendment After Final in 10/22/2002 to amend the specification to overcome this objection. However, this Amendment After Final was not entered into the record at that time. Applicant is requested to amend the specification accordingly to the Amendment After Final in order to have the specification to be changed in the record. Furthermore, the replacing paragraph filed in the Amendment After Final has a typographical error while having both the reference number (3) to indicate the header at line 1 and line 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Showa Alum Corp (JP 404263720A) in view of Takahashi Eiji (JP 04081288) and Dynamit Nobel. Showa Alum discloses a heat exchanger header for attachment to a heat exchanger having aluminum components, the heat exchanger header (22,23) consisting essentially of steel brazing to an aluminum parts (5) of the heat exchanger. Showa does not disclose a connecting piece having aluminum on one side and steel on one side being explosive bonded together. Takahashi teaches (figure 7) about using a connecting piece (3) consisting of steel on one side (4) and aluminum on the other side (5) so that steel material (1) is welded to the steel side (4) and aluminum material (2) is welded to the aluminum side (5) to develop sufficient joint strength between aluminum and

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steel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Takahashi's teaching in Showa Alum Corp's heat exchanger develop sufficient joint strength between aluminum and steel. Takahashi does not disclose that the aluminum and the steel side are bonded together by explosive bonding. Dynamit Nobel teaches to bond steel and aluminum materials together by explosive bonding to produce a firm bond in order to enhance the joint strength between aluminum and steel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Dynamit Nobel's teaching in the combination device of Showa Alum and Takahashi to produce a firm bond in order to enhance the joint strength between aluminum and steel.

Allowable Subject Matter

Claims 8,12,13 and 17 are allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hardwick (US 4,756,464) discloses a method of manufacturing of composite laminar metal plate.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703) 305-0768. The examiner can normally be reached on from 9:30-6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

Tho Duong

January 10, 2004.

Henry Bennett
Supervisory Patent Examiner
Group 3700

